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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/747,192 | 12/21/2000 | David G. Guillot | 1082-020 | 5573 |

7590 09/03/2003

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EXAMINER

LEE, EDMUND H

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS 11

Office Action Summary

Application No.

09/747,192

Applicant(s)

GUILLOT, DAVID G.

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 4,5 and 8-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

1. Claims 4,5,8-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 10.
2. Applicant's election without traverse of claims 1,2,3,6, and 7 in Paper No. 10 is acknowledged.
3. It should be noted that claims 1,2,3, and 7 are generic claims of elected Group A and claim 6 is drawn to the elected species of Group A.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bourdoncle et al (USPN 5840227). Bourdoncle et al teach the claimed process as evident at col 4, lns 15-25; col 4, ln 49; col 5, lns 35-40; and figs 1-2h.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 2, 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourdoncle et al (USPN 5840227) in view of the admitted prior art as set forth on pg 8, lns 23-24 or Harvey et al (USPN 6606852). In regard to claim 2, Bourdoncle et al teach the basic claimed process including a method of insulating a case of a rocket loaded with a solid propellant (col 4, lns 15-25; col 4, ln 49; col 5, lns 35-40; and figs 1-2h); preparing insulation from a composition comprising a crosslinkable elastomer base and carbon fibers, the composition including a liquid elastomer base in a sufficient concentration to permit the carbon fibers to be dispersed into the composition by mixing under substantially solvent-free conditions (col 4, lns 15-25; col 4, ln 49; col 5, lns 35-40; and figs 1-2h); and curing the composition to form the insulation and insulating the case of the rocket motor with the insulation (col 4, lns 15-25; col 4, ln 49; col 5, lns 35-40; and figs 1-2h). Bourdoncle et al, however, does not teach using a crosslinkable EPDM terpolymer as the crosslinkable liquid elastomer base. Both the admitted prior art and Harvey et al teach the well-known use of liquid EPDM (e.g., TRILENE 67A) in the rocket motor insulation art. Bourdoncle et al, and the admitted prior art or Harvey et al are combinable because they are analogous with respect to insulation for rocket motors. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the crosslinkable liquid EPDM terpolymer of the admitted prior art or Harvey et al as the crosslinkable polymer of Bourdoncle et al in order to produce a durable and effective insulation layer. In regard to claim 3, Bourdoncle et al teach applying the insulation to an interior surface of the case and interposing the insulation between the interior surface and the solid propellant (figs 1-2h). In regard to

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claim 7, Bourdoncle et al teach mixing the elastomer base with the carbon fibers in a mixer having two helical blades (col 5, lns 40-46)--as a note, this constitutes mixing the composition in a vertical-blade mixer or sigma-blade mixer. In regard to claim 6, Bourdoncle et al teach using an elastomer base that is in a liquid state (col 4, lns 15-25; col 4, ln 49; col 5, lns 35-40; and figs 1-2h). Both the admitted prior art and Harvey et al teach the well-known use of liquid EPDM terpolymer (e.g., TRILENE 67A) in the rocket motor insulation art. Bourdoncle et al, and the admitted prior art or Harvey et al are combinable because they are analogous with respect to insulation for rocket motors. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the crosslinkable liquid EPDM terpolymer of the admitted prior art or Harvey et al as the crosslinkable polymer of Bourdoncle et al in order to produce a durable and effective insulation layer. The use of the well-known liquid EPDM terpolymer as the elastomer base of Bourdoncle et al constitutes more than 90 weight percent of the elastomer base being a crosslinkable liquid EPDM terpolymer. In regard to claim 7, Bourdoncle et al teach mixing the elastomer base with the carbon fibers in a mixer having two helical blades (col 5, lns 40-46). The use of a vertical-blade mixer or sigma-blade mixer is a mere obvious matter of choice dependent on the equipment availability and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the claimed mixers are well-known in the molding art for their efficiency. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use

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either of the claimed mixers in the process of Bourdoncle et al in order to efficient mix the fibers and elastomer base of Bourdoncle et al.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Graham et al (USPN 5821284) teach using a liquid EPDM terpolymer as part of a rotor motor insulation composition. King et al (USPN 4666763) teach preventing the breaking of fibers during a mixing process by using a solution of both solid and liquid components. The reduction of viscosity reduces breakage. GB 1301296 teaches preparing insulation for rocket propellants by using a solvent-free composition. WO 91/19754 teaches improving the chemical and heat resistance of a prepreg by using a solvent-free plastic mixture.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 703.305.4019. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 703.305.5493. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.


EDMUND H. LEE 8/25/04

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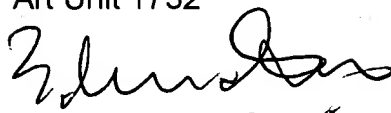
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Primary Examiner

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EHL


8/25/07